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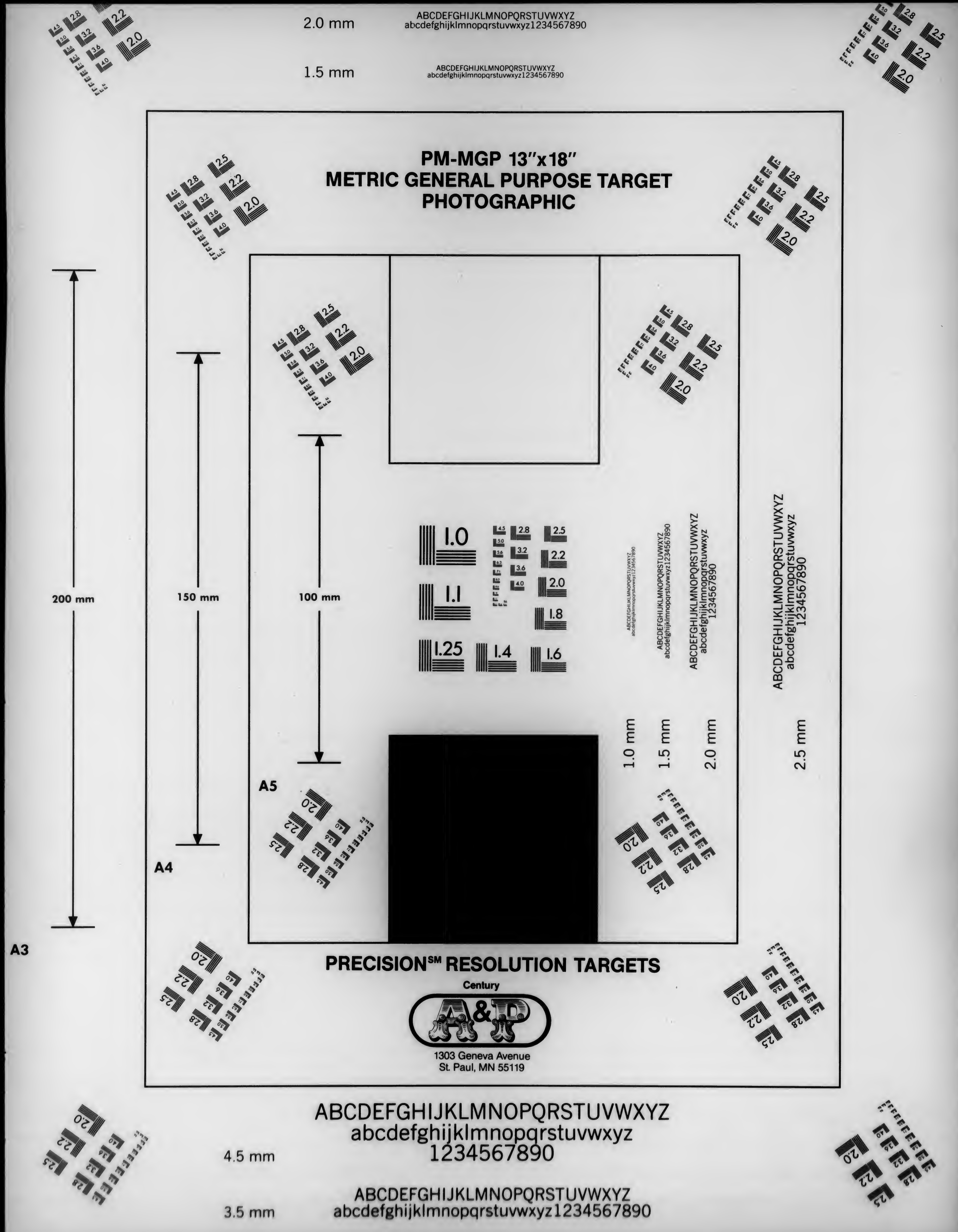
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Black Diamond's

Primer of Cost Accounting

THE BLACK DIAMOND'S PRIMER OF COST ACCOUNTING

A System Adapted for the
Use of Retail Coal Merchants

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Reprinted from THE BLACK DIAMOND
For 25 Years the Coal Trade's Leading Journal

Introductory.

There is a vast difference between mere bookkeeping and accounting. The clerk who stows away business information in books is a bookkeeper. The man who draws off that information and uses it to reform the business is an accountant.

The accountant is not merely a bookkeeper. He may be a specialist in accounts. He may be the owner or manager of the business. In fact, any man who uses information taken from the books to suggest how the business practice can be improved is an accountant. His work consists of gathering from the books the information which tells whether it is costing too much to deliver coal, to store coal, or to buy and sell a certain grade or size of coal. His work is to gather from the books whether too much of the yard trade is devoted to slow-moving coal or whether not enough space and attention are given to fast-moving coals. All of this information is in every set of books. It is the accountant who drags it out and uses it.

Accounting concerns itself with getting information out of the books. However, information, to come out of the books readily, must be put into the books in a certain orderly fashion. The accountant makes things easy for himself by seeing that the business information gets into the books properly.

This volume is on retail accounting—not on bookkeeping. It indicates how business information should be stowed away only in that way, telling how that information should return to the manager's desk to make a vital suggestion about economy, expansion, or a shift in stocks.

Also it is written for the small retailer. It is written for the yard manager and the yard owner who must be his own accountant. It is designed to tell him how to have the bookkeepers store away the information and then how to have that information summarized and tabulated to yield instantly all he needs to know about the business.

The big point of this volume is that it advises every retail dealer to keep an account with each bin. Only by keeping an account with each bin or with each size as well as grade of coal can he know which are slow-moving or fast-moving coals. Only by accounting with each bin can he tell what the degradation or loss is. Indeed, only by keeping an individual account with each bin can he tell all he must know about each size and grade of coal.

This purposeful little volume is made as simple; properly it is called a primer study of retail coal yard accounting.

The close competition of the day makes it imperative that the coal merchant locate definitely the gains and losses, not on a dollar basis but on a penny basis. The demand is for efficiency, but efficiency is impossible without accurate accounting. No man can cut cost or speed up action unless he knows where costs are too high and where action is slow. Such action presupposes a thorough knowledge of all the items of income and outgo.

This information to be of any service cannot be scattered purposelessly through the books. It must be recorded systematically and then centralized in a statement that will give the yard manager a quick and yet comprehensive survey of all essential details. To this end, experts have evolved what has come to be known as cost accounting. This is a branch line of inquiry. It does not confuse by mingling this one big item with the rest of the accounts. It asks and answers the vital question: What does it cost to handle coal per ton?

It is not practicable nor economical for the coal dealer to hire an expert to draw off this information. It is practicable, however, for him to install a simple system of reports which will give him essential details of cost. These details compared with the same items for previous months will show the fluctuations. Thus, if the cost of handling per ton is too great to allow a profit, the merchant must raise the selling price or cut the cost. However, if the cost of handling one grade or size is small and shows a profit, while another cost is high and shows a loss, the dealer should push one coal and let the other die.

The expense of arranging a ledger to make it easy to draw off a cost statement is small. The few additional forms necessary are inexpensive. However, since the result of these alterations may mean the continued solvency of the company or the beginning of a profitable career, a few pennies spent in blank paper should not stand in the way.

In this little volume an attempt is made to show how such a system may be installed. The expenses are posted in the ledger in such a way that comparisons readily may be instituted. To do this, a space is provided for each item, and each is put in its proper place in the ledger. Then this volume shows how the comparisons should be made and indicates the sources of the information for these comparisons. The final statement drawn from these sources will give the cost of handling each ton of each grade of coal.

Chapter One

All Expense Must Be Divided Into "General" or "Operating," the Charge Being Indicated by Whether the Work Is for All Departments or for Only One.

With the "cost of merchandise" beyond his control and with the selling price fixed by his competitor, the retailer is in a position where the "cost of handling" coal is the one factor which decides in favor of success or failure. That is "cost of merchandise" subtracted from "selling price" is not "profit." On the contrary, "cost of merchandise" plus "cost of handling" subtracted from "selling price" is "profit."

To many retailers the variations of the items included in "cost of handling" seem endless. So soon as a coal merchant has established a system that is apparently satisfactory and thinks that he has reduced the cost to a minimum, some item proves to have been omitted from his calculation; this alters the result so as to show a loss where a profit seemed sure. The fault here lies in the fact he has no statistics which will permit him to verify any items included in his statements. For this reason, comparisons for the purpose of regulation are, of course, impossible. The dealer is thus left in the unenviable position of never really knowing whether his actual operations are yielding a profit or a loss; if either is incurred, he has no information which will direct him to the proper channel through which economy will flow.

Every coal merchant keeps books of a sort, very few merchants analyze the expense items, because the books are not so kept as to make analysis easy. In fact, it is the prevailing custom to post all expense items under the head of "general expense" and let it go at that; no attempt is made to separate the various expenses into either grand divisions or detailed departments to see if they are running either above or below "normal" or average for the particular work they cover. In other words, the merchant will keep a set of books but make no attempt to utilize the information they contain in protecting himself from preventable inroads upon his profits and thus upon his capital.

There is no known standard system for keeping coal accounts. The hit and miss systems now employed vary from keeping books on the stubs of the check book to elaborate and costly "systems" requiring the services of many clerks. As a result, the statements drawn from the books of most retail coal houses are far from complete. They are so at odds with each other as to suggest that most all are wrong. Certainly they may not be used as a safe basis for estimating or recording the "cost of handling." This variability in "cost of handling" finds natural expression in variability of selling price. In that one thing alone—ignorance of cost of handling—lies the real secret of trade demoralization.

This condition of affairs obtains not because the average dealer does not desire the correct information which is necessary to a true record. On the contrary, he is only too willing to get at the facts and does pay heavily—sometimes far too heavily—for even the dangerously inaccurate record that is given to him.

The purpose of this volume is to outline as briefly as possible an economical and inexpensive system by which it will be possible to determine "cost of handling."

The executive officer in any campaign should be thoroughly familiar with the organization he commands, even to the smallest detail. This knowledge is essential, if he is to proceed intelligently to strengthen any weak spots in his force or if he is to guard against a repetition of any heavy loss. The executive also must be familiar with the enemy's forces or—to put it in another way—with the obstacles he must overcome if he is to win success. If the coal company executive is in a campaign to reduce "cost of handling," he must be familiar with all "items" that create cost as well as with the organization or the part of the organization that creates them. In other words, the merchant must be familiar with all the items that go to make up the entire expense of operating the coal yard. To do that, he must have a place where each cost is charged.

Even a little study of retail accounting will prove that all expenses may be divided into two broad classes—"general expenses" or overhead expenses and "operating expenses" or direct expenses. That is, all expenses are divisible broadly into two groups. They go into the cost of buying, selling, handling and administration or they are confined to one detail to which only they belong. There are direct and indirect expenses, the character of the outlay determining which is which. For convenience, we style these major divisions as "Group A" and "Group B." In "Group A" or "general expenses," which is "overhead," we include the following expenses, which cover, broadly, all departments:

1. Officials.
2. Office salaries.
3. Salesmen and commission.
4. Discount and interest.
5. Rent.
6. Lighting.
7. Telephone.
8. Advertising.
9. Insurance.
10. Taxes.
11. Depreciation.
12. Postage.
13. Stationery.
14. Incidentals.

In "Group B" or "operating expense" we include those things which are directly chargeable against the coal, such as:

15. Yard labor.
16. Unloading expense.
17. Teaming expense.
18. Pocket labor.
19. Pocket supplies.
20. Demurrage.
21. Shortage.

The first group headed "general expenses" includes only those expenses which are usually

termed "overhead." This means that all branches of operation must bear their pro rata of this expense as all the costs incurred are for the benefit of the yard or plant as a whole. The second group or "operating expenses" includes only those costs that directly affect the particular commodity or piece of work and which are not incurred until that commodity is handled and the work done.

How much does it cost?

No question is so vital to the merchant in any line as that single five-word combination. Upon its correct answer depends the mechant's business life. Until it is satisfactorily answered, no man may know whether he is gaining or losing ground; certainly, he cannot tell whether his efforts are rewarded corresponding with their merit.

The elements making up the cost of coal to the coal merchant do not consist only of the amount he pays for the coal at the mines and the freight charges. These are items of cost to be sure, but they are arbitraries and do not enter into his alterable calculations; he is powerless to reduce them to any appreciable extent by any economies which come under administration. That is, before coal is entered on the merchant's books he knows exactly how much his merchandise account must be debited. All alteration in cost must be effected after this entry is made. Therefore, the retail coal merchant realizes that the determining factor in profits is not so much his "cost of merchandise" as his "cost of handling." The first is an arbitrary fixed for all dealers; the second is a changeable factor under the control, more or less, of each dealer.

The price for which the coal is sold—as determined by modern merchandising methods—is more or less fixed by "competition." Assuming it to be impossible to get a common understanding as to the form which competition shall take, the one avenue to profit is through the reduction of the cost of moving the coal to the consumer. Indeed, this reduction of cost determines both the existence of any profit at all or the probable increase of that profit.

The first item always to be considered in the analysis of any cost account is the compensation allowed the various persons working for the firm or corporation. This includes every salary, from the highest salaried executive to the lowest waged laborer; the item of salaries and wages is usually the heaviest expense in any concern.

Webster defines salary as "The recompense or consideration paid, or stipulated to be paid, to a person at regular intervals for services. Fixed regular wages as by the year, quarter or month. Stipend. Hire." A footnote to the definition states that "recompense for services paid at, or reckoned by short intervals, as a day, or week, is usually called wages." The same authority defines wages as "That for which one labors. Meed. Reward. Stipulated payment for service performed. Hire. Pay. Compensation."

From this we see that salary and wages are much the same, the terms, by usage, differing in degree and not in kind. For the purpose of this volume, we will consider the term salary to include ***the compensation paid to employes whose duties are connected with the general or overhead expenses*** included in "Group A." Wages we will consider as indicating the payments made to those ***whose work is a direct charge to the cost of handling any one thing,*** and whose duties are in connection with "Group B" or "direct" or "operating expenses."

This division of the total expense into "general" or overhead and "direct" or operating expense is one of the most vital distinctions which any retail coal merchant can make. It is the one distinction he must make if he wants to have his accounts accurate and usable. A simple illustration or two will make the advisability of this division apparent to any one.

The general manager of the retail yard—who may also be the owner of it—is working one instant upon office detail, the next instant upon unloading, and the next instant upon delivery. In the course of time, he touches every detail. It is presumed that whatever he is doing, he is spending his time to the best advantage of the business as a whole, yet the time which he devotes to each department must in some way be charged against that department. When a detailed charge is impossible, a lump charge must be made. Thus it is reasonable to charge his time and hence his salary broadly over the whole operation. That is where it should be. With the charge distributed broadly in this way, the general manager may feel at liberty to devote his time or any part of it to anything which seems to demand his personal attention.

On the other extreme of the pay roll is the yard laborer. He has no value to any department except in the manual labor which he performs for that department. Today he may be employed unloading coal. His work, there, is a direct charge not only against coal in general but against the particular coal which he unloaded. Tomorrow he may be employed in, we will say, one of the side lines of the company; he may be loading or unloading lumber. The work he does is for a particular department, which receives the benefit of that work. The charge should be made where the benefit is received. Therefore, the charge of his wages should be made against the coal department or against the lumber department, or against any other department in which the day laborer is employed.

That is, the compensation of the general manager is a charge which properly is spread over the whole business which gets the benefit of his services. The wages of the day laborer constitute a charge directed against one particular department only of the business. This department gets all the benefit of his work; this department should be charged with all the compensation paid to that man.

This, in a general way, explains the reason for the division of all the expense into the two big headings, "general expense" and "operating expense." One applies to the operation as a whole, the other applies to the operation in detail.

It is possible, by continued analysis, to separate all expenses in this way and to make either a direct or a general charge out of each item of outlay. This must be done—and must be done properly—if the books are to make a proper showing. In no other way will it be possible to have such a record on the books as will show the executive of the company where the leaks in his system are and where costs may be cut by proper attention to detail.

Chapter Two

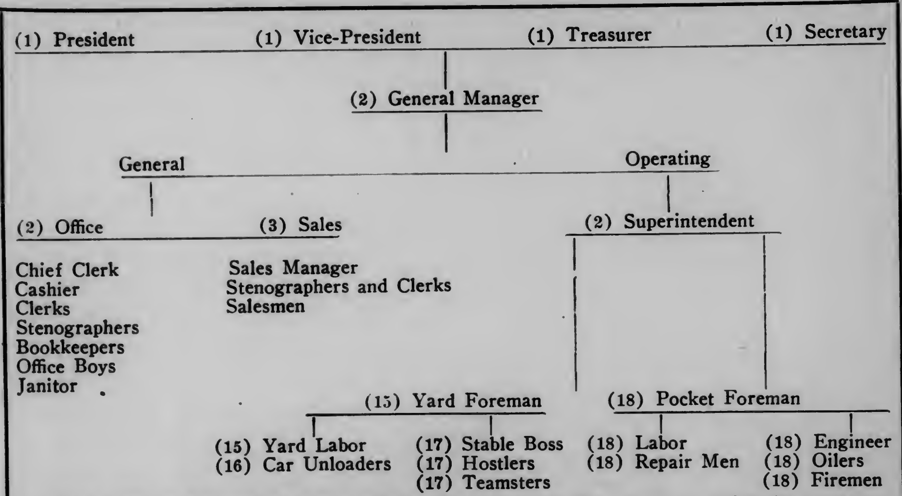
In This Chapter Is Told Why the Major Items Are Charged Under General Expense —Terms Are Defined in a Simple Fashion.

In the first article on retail coal accounting it was pointed out that two sets of charges only can influence the price of coal. One is the "direct expense" or that incident to handling a particular grade or car or lot of coal. The other is the "general expense" which, while covering the operation of the whole plant, is not chargeable against any one bin and hence must be apportioned, each ton of coal handled bearing its share.

Anyone of even ordinary intelligence can see that if a given amount of labor is performed in any handling of a certain lot of coal, and if this labor costs a given sum of money, that coal only should have charged up against it the cost of that labor. The "direct expense" is because it is obviously far easier to account for than is the "general expense." However, the cost per ton is not figured properly, unless each ton of coal handled in the yard during a given period carries its proportion of the overhead.

Bookkeepers and business men do not disagree so much on the fact that all items of expense should be charged against the coal. They do disagree as to where the various charges should be made. In this series of articles, we are making an arbitrary division of the expenses, by items, into "general" and "direct" expense. The purpose of this one article is to show that each one of the items listed under general expense belongs properly there and nowhere else.

In order more clearly to demonstrate the distribution of the items, included in amounts paid for salaries and wages, there is shown with this a chart outlining the duties of the persons among whom the total pay roll is divided. In this chart is shown a probable organization of a corporation engaged in a retail coal business. It will be seen that there are a great many persons engaged in the activities of this hypothetical company. The list includes a good many more than is usual in an actual business. While studying this diagram it must be borne in mind that ***the items composing it do not necessarily denote persons,*** but rather ***duties or positions.*** One person may very well perform one or more of the functions indicated. For instance, one person may perform all the functions of the first four items; he may be president, vice-president, treasurer, secretary and general manager and his compensation be charged to Account One "Officials." Another person may perform all the duties enumerated under "Office" and the compensation would accordingly come under Account 2, or "Office salaries." On the operating side of the chart the superintendent while having charge of all the activities in the yard will also perform the duties of the different foremen indicated, but as these duties are so



Each class of employe is shown and also the number of the account to which the compensation is charged to accord with the numbers shown in each account in the grand division of accounts styled groups A and B in Chapter One.

This chart indicates no charges other than those for Salaries and Wages.

A Chart by which Salaries and Wages Are Located Under the Proper Account.

varied in character, and actually cover everything done in the yard, his compensation should be charged to the whole work and is therefore placed in Account 2. All other items on the operating side are direct charges to the particular piece of work performed and are to be charged to the account indicated in the chart. It will be noted that, in the yard proper, the yard labor and the labor which has to do with the teams, are separated, although both of the sections are under the yard foreman. The proper distribution of these wages will be shown in the discussion of the labor charges under Group "B," which will appear in a later issue.

The first requisite in the installation of a set of cost accounts is a knowledge of the items that compose each account and the proper and logical position of the account in the books. It often occurs that there is a difference of opinion about the disposition of the various charges and occasionally a charge may be authorized to one account that should properly belong in another. Especially is this true where the several officials are empowered to expend the funds of the firm for any purpose. In order to prevent this indiscriminate practice and to settle all controversies, it is well to provide a classification in which the accounts and the items that compose them are defined. All expenditures of whatever nature should be recorded in accordance with the classification and itemized under the definitions contained therein. The strictest adherence to this rule is absolutely necessary to establish a true and systematic account of the costs.

For the purpose of classifying and defining the various charges in the cost account items as grouped in Chapter One, we formulate in this chapter a definition of the accounts.

No. 1. "Officials." The subhead "Officials" is used to designate the first account under Group "A." To this account is to be charged the compensation and expenses paid to the officials of the corporation or firm who are also presumed to be stockholders such as the president, vice-president, treasurer, secretary, general manager, and all those who through ownership of stock or who are chosen by the board of directors to direct the policies and affairs of the company. It is presumed that each of these officials is entitled to a certain stated salary and this account must be charged only with the salaries and expenses of the officials enumerated.

In a great many corporations there is maintained a "Drawing Account" in which is charged the amount drawn by officials in advance for their proportion of the earnings of the company to date. These advances in effect are money borrowed from the treasury of the company and should be regarded as such. The transaction is entirely between the treasury and the official in question, the cost account being in no way affected by these advances. The amount drawn should be carried in a separate general ledger account which is usually styled "Personal Account."

This account "Officials" also carries all expenses incurred by officials while traveling in the interests of the company. Such expenses are classed separately from the amount allowed traveling salesman as traveling expenses which, of course, are charged to the selling expense, as will be shown later. The Account No. 1, then, includes only the salaries of the officer and the expenses incidental to the performance of his office.

No. 2. Salaries—Office. This subhead is in a measure self explanatory. To this account should be charged the salaries of the executive in charge of the detail activities in the office of the organization and his assistants. This official, the general manager, will also be in the charge of the operating ends of the business and, as shown in the chart, both the recording and the operating divisions report to him and his compensation is therefore a charge to general expense because his services cover the whole work.

The office duties he will delegate to the office manager who in turn has charge of and is responsible for the chief clerk, bookkeepers, cashier, stenographers, clerks, office boys and the janitor. The compensation allowed each of the persons enumerated is charged to this account and as their services also cover the whole work it is a correct "overhead" charge.

No. 3. Salesmen and Commission. This account is one of the general expense accounts for a department which entails expenses which in total form a very heavy percentage of the cost of handling. To it is charged the salaries paid the general sales agent, his secretary, the salesmen, their traveling and incidental expenses and the commissions and bonuses paid to them. It should not be charged with advances for unearned commissions as such advances are not a proper charge to expenses until the amount has been earned. An advance is in the nature of a loan from the company and is a treasury matter that should be carried in a separate account generally called "Advance Account." In an advance on commission that is not yet due this should not be charged until the commission is payable, in which case it automatically takes its place in the items of expense. All advances should be carried in a separate "Advance Account" and when the proper time comes the Advance Account should be credited and the selling expense charged. The percentage ratio in the increase and decrease of this Salesmen and Commission account to the increase and decrease in the sales will determine the efficiency of the selling department and the details comprising the account should determine the efficiency of the individual salesman.

It will be seen that it is highly important that all charges to this account should contain nothing but amounts actually expended as it is from the figures in this account that the executive is guided in his selling policy. The account is a direct and heavy charge on the executive department and thus on the overhead expense and great care should be exercised in maintaining its integrity.

It will be noted that in the first three items of the classification of accounts under Group A, we have concerned ourselves with compensation paid to sundry officials and employes as an overhead expense. The subject of compensation of employes whose labor is a direct charge to each piece of work, will be brought up in the discussion of the items comprising

Group B. For the present we will discuss the other charges affecting the overhead expense, the next item being No. 4.

No. 4. "Discount and Interest." This account should be charged with all discounts allowed for cash or any other reason. Allowances made for prompt payment, for purchases in large quantities, or if the purchaser does his own hauling and delivering, are proper charges to this account. It should carry any discrepancy between a quoted price and the actual selling price.

It often happens that there are a large amount of open accounts carried as "Accounts Receivable," thus tying up the working capital of the dealer. Therefore, it is incumbent upon him to borrow money for the conduct of his business. The interest on these loans is a proper charge to this account as it is an expense incurred by the dealer in extending the credit to his customer. If all the sales of the dealer were on a cash basis, the expense would not be necessary as then he would not have to hypothecate his credits to the bank for a loan. If, on the other hand, the dealer exacts interest on long or overdue accounts, this account should receive credit.

Interest on money borrowed for improvements, new buildings and betterments should not be charged to this account but must be carried in a separate general ledger account.

No. 5. Rent. To this account should be charged all amounts paid for the use of premises, buildings and offices; it should contain the charges for rent of all branch offices. In case any premises or offices or parts of offices are sublet for any purpose the account should receive credit. If the corporation or firm owns its office buildings and premises, interest may be charged on the appraised value of the property usually at the rate of six per cent per annum and the amount is debited to rent. This is done to determine the earning value of the property. It may happen that property now advantageously used as a coal yard may rise in value until the ground is too valuable for such a purpose, in which case it would be wise to dispose of it and place the yard in a cheaper location. In this manner the earnings of the real property will be properly indicated in the records.

No. 6. Lighting. To this account should be charged all expenditures for the lights used in illuminating the offices, the amount being usually determined by the lighting company's bill. The lights for the yard and the machine plant, i. e., pocket and elevating machinery, should be charged directly to that part of the work as will be shown later. Only the lights for the offices are properly an "overhead" expense.

No. 7. Telephone. To this account should be charged amounts paid for the use of the telephones in the various activities of the coal yard offices and branch offices. As telephone service concerns the whole work, it is a proper charge to general or "overhead" expense.

No. 8. Advertising. To this account should be charged all expenses incurred in advertising the business whether by newspapers, programs, circulars, blotters, letter filers, show cards, booklets, novelties—such as pencils, knives, calendars, or premiums of any nature. To this account should be charged all expenses incurred by participation in fairs, the cost of booths, etc., and all money paid as the firm's proportion of any municipal movement for the betterment and exploitation of the town as a trade center. Some firms also charge to this account all moneys paid as a contribution to public movements for the relief of distress in case of great disasters, such as great fires or floods or catastrophes of like nature and to this account also they charge any money or coal they give for charity. These last two charges are based on the advertising value supposed to be attached to a reputation for benevolence but as a strictly advertising accounting proposition are of not so much value as the firm's reputation for integrity or efficiency which may be properly made a subject for advertising. That is, public attention may be drawn thereto through the medium of the press or otherwise. No one would care through his advertising to proclaim publicly his activities as a philanthropist or as a public spirited citizen. Therefore a good, safe rule to follow is to charge the advertising account with only the amounts expended in promoting the publicity of the business of the merchants as buyers and sellers of merchandise and not as factors in welfare, whether public or private. Such benefices should have a separate account.

So far, these definitions have treated of accounts which accrue from month to month or those recorded as the expenses are incurred. They have no fixed status, but fluctuate as circumstances dictate. One period they may be normal; another they may be abnormally low, and in still another excessively high.

Chapter Three

Depreciation Account Is Studied in Detail and Reasons Are Given Why the Charges Should Be Made in a Given Manner.

In studying retail coal accounting, no question is of more importance than: What is depreciation and how shall it be charged off?

Some retailers do not make any charge to depreciation at all. Others make such a charge and then eat into it by making the depreciation account pay for the repairs. Others set aside a certain sum for depreciation but use the wrong basis. They say:

"We make this charge once a year only. There is no need to revise the figures carefully. Let the basis be the same as last year."

Bookkeeping is a matter of figures. Figures are scientific. No guesses about figures will do, because guesses are not scientific. To use the depreciation account properly is to take an inventory of the value of a plant as carefully as one would of stock. The appraised value this year subtracted from the appraised value from last year, is the total amount of depreciation to be charged off. This, expressed in cents per ton handled, gives the amount which must be charged when figuring the total cost per ton of coal moved. This chapter deals mainly with depreciation. Before going into that big subject it is necessary—if the chronology is to be observed—to give a definition to a couple of other accounts. These definitions are important as they are necessary to accurate and scientific bookkeeping.

In Chapter Two, we discussed various accounts the charges to which vary from month to month. There is another set of accounts which may be termed fixed, that is the amounts are charged in a lump and the total prorated over a year. These accounts are detailed under the sub-heads, "Insurance," "Taxes" and "Depreciation." All these items are nearly always determined in advance and are almost always paid in advance. It would not make a true cost showing if these amounts were charged in a lump to the month or period in which they were paid, but each month must bear its proportion of the expense separately as will be shown in the definitions to follow.

No. 9—Insurance: To this account should be charged all amounts paid for insurance as they become due and the cost of the insurance for any given time should be added to the total costs incurred during that time. In case the insurance premium is paid in advance, an account should be opened with "Insurance" and the entire premium charged thereto. For cost purposes, there should be an account entitled "Expired Insurance" to which should be charged the amount of the insurance to cover the period involved. The amount charged to "Expired Insurance" should be credited to the account "Insurance" and when the policy has matured, the charge to "Insurance" will be automatically wiped out.

For instance, if the amount of the premium on January 1 is $120 for a year, the account "Insurance" is charged with $120 and when the books are closed for January the "Expired Insurance" account is charged ten dollars and the same amount credited to "Insurance." It is obvious that at the end of the year, when the accounts for the month of December are closed, the credits and debits to "Insurance" will balance and the costs have only been charged each month with the $10.00 expired insurance in that month. If, however, the insurance is not paid in advance, the amount should be estimated and one-twelfth charged to the costs each month and all adjustments made when the actual amount is ascertained.

No. 10—Taxes: This account is handled in the same way as "Insurance." To this account should be charged all amounts assessed against the firm or corporation for taxes. An account should be opened entitled "Taxes" which should be charged with the amount of the taxes for a year. For cost purposes there should be an account entitled "Accrued Taxes" which is to be charged with the amount of taxes as they accrue, as in this way only that part of the taxes that affect the costs for the month will be shown. The account "Taxes" is credited with the amount of the accrued taxes each month as they are charged off to the "Accrued Taxes" account. Taxes are paid at various times during the year and until they are paid they should be estimated and all adjustments made when the actual amount is ascertained.

One of the peculiar things about capital is that the minute it goes to work it must make some provision to protect itself against the many influences that are alert for its destruction. This protection is generally some form of insurance which must be paid for out of the earnings. If capital remains idle, this insurance must be paid out of itself. One way to put capital to work is to invest it in some form of equipment that will take raw material and turn it into a finished product. The difference between the value of the finished product and the value of the raw material plus labor cost, determines the earnings of the capital invested. It follows that the *value* of property is based upon its earning power.

There is a difference between *property* and the *value of property*. This was illustrated not so very long ago in London, England, when horse cabs and omnibuses were very popular and—because they were employed for a good compensation—valuable. Many men were employed in this industry and a great deal of capital was invested in horses, harness, cabs and omnibuses. With the advent of the taxicab system horse-drawn vehicles became obsolete and those who had engaged in this form of city transportation were forced to seek other means of livelihood or purchase taxicabs.

The cabs, omnibuses and other paraphernalia were relegated to the junk pile, the *value* of the property had depreciated to almost nothing although the property itself was still there. Public demand for better and quicker service had decreed the destruction and rendered obsolete one form of transportation. To meet this demand, capital had to be invested in the new equipment. The earnings of the capital invested in the auto cabs was probably not greater than that invested in the horse cabs, yet the service to the public is better and more efficient, so the man with the auto cab got all the business; he captured the market for transportation. To compete with him, the others had to furnish equally excellent service and the horse cab was doomed. Its *value* became nothing more than the price it would bring as junk.

This is only one of many instances showing how values may be attacked. The coal retailer may have experienced a like lowering of values in his plant. His neighbor may have installed a pocket and mechanical unloaders or may have adopted some newer method of handling coal that would decrease the cost of handling. He thus would be able to name to buyers a better price on his coals. The better selling price secures the market. The new appliances place competitors at a disadvantage. This reduces the earning power or value of their properties. To the many safeguards required by capital, must be added the very necessary one of protecting its investment from loss of value. Hence the account "Depreciation" is provided.

No. 11—Depreciation. To this account should be charged all of the estimated loss of value sustained by the wear on the buildings, machinery, power plant, tools, fixtures, furniture and equipment used in the business.

To offset this charge, there must be opened an account entitled "Depreciation Reserve Account" to take care of the corresponding credit. The Depreciation Reserve Account is a general ledger account *that in no way affects the cost.* It is mentioned here merely in order to explain what disposition is made of the amount charged to "Depreciation." It is a bookkeeping safety deposit box, and nothing more.

The most obvious way of arriving at the depreciation of value would be to ascertain, by competent authority, the value of the fixed assets (buildings, tools, machinery and other equipment) at the end of the company's fiscal year. This sum should then be subtracted from the appraised value of the preceding period. The depreciation is accounted for on the books by making the necessary entries in the corresponding accounts, charging Depreciation, and crediting Depreciation Reserve.

It will be noted that this requires a whole or what is called an accounting year to make the proper entries. That is, no man can know what his depreciation charge is to be until the end of the year. Because of the length of time required and because of the great difficulty in ascertaining quickly the proper and correct deduction in value, this method is neither practicable nor safe. On that account some other and quicker method must be devised.

The proper basis upon which to charge depreciation is and has been the subject of great diversity of opinion. The items in the account are and have been ascertained by many different methods. The only thing common to these varying opinions and methods is the fact that the amounts to be charged to depreciation must be governed by circumstances.

There is in fact no hard and fast rule to apply. What would be a proper charge, under certain conditions, in one place, would be all wrong in another place. The charge is based upon a contingency; upon something that is going to happen; upon the certainty that a piece of machinery, a tool, or a building will with constant use or even while just existing eventually wear out. If the business is to continue, that piece of machinery or that building must be replaced. The amounts charged to this account are in reality to provide a fund for this necessary replacement. These are considerations incident either to use or to mere existence. There are other considerations which grow out of competition. If the equipment passes out of vogue, it naturally loses value faster. That means that depreciation under such conditions must be faster.

The cost of the buildings and equipment of all description originally is met by subtractions from the capital account. The depreciation charge is simply a reserve established to protect capital account because of the lowering of values occasioned by use and exposure or by mere existence or by changes in competitive conditions.

Owing to the uncertainty of the various elements on which this charge is based, the total amount to be charged to depreciation is usually estimated on the probable life of the building or equipment of whatever kind. This estimate is based either on the experience gained from long continuance in business or upon the experience of others in similar lines of endeavor, if such experiences are available.

Great care should be used in estimating a depreciation charge. A man may estimate the life of a coal bin at ten years and provide for the depreciation of value of that bin at the rate of ten per cent per annum. At the end of six years he finds that his bin will have to be replaced. In this event, the man has based his estimate too low. He has, thereby, incurred a loss of value for which no provision has been made. The difference between his estimate of ten per cent per annum and his actual loss of value of sixteen and two thirds per cent per annum is an amount equal to six and two thirds per cent per annum of the capital invested in the bin. This will result in an extraordinary charge upon his revenue, as in the replacement of the bin he will have to provide the funds from his current revenue.

If, however, he has amply provided for this loss of value and if at the end of ten years the bin is still serviceable and no new bin is necessary, the capital invested has all been recovered from the revenue and, theoretically, all the earnings of the amount invested in the bin will thereafter be clear gain.

But, the fact remains that at some time the bin will wear out and will have to be replaced. When the time of replacement does come, no doubt consideration will have to be given to new and improved methods, to advanced ideas in construction, to better and to more durable materials. On these accounts the cost of the

new bin will greatly exceed the original cost of the old bin. What the dealer wants is a new bin that will fit as well into the conditions at the time it is built as the old one fitted into the conditions at the time it was built. To get the new bin the dealer should continue to provide, out of his revenue account, a replacement reserve. If he fails to do that, he must draw upon his capital, which is a thing he is steadily trying to avoid.

In this way, the dealer may avoid the necessity of making any charge to his capital account for the new structure. If for any reason, the new structure is not built he has provided from his revenue a reserve which returns his original capital and even more. By making a proper charge to depreciation he can't lose, but he may gain.

Because of the difficulties involved in basing a correct estimate, many firms do not carry this important account and depreciation of value is not considered when they figure profit and loss. When this course is pursued the selling price—if competition is keen—is almost sure to be less than it should be by just the amount per ton which should be charged to depreciation. In these days of small profits or close margins this item not infrequently decides against profit and in favor of loss.

Other merchants carry this account on their books with the depreciation figured on an arbitrary estimate. That is the life of the plant or equipment is estimated without regard either to the probabilities or to the law of average. Such an estimate is, of course, liable to be erroneous. However, even an arbitrary depreciation charge is far better than giving the subject no consideration whatever.

In arriving at an estimate of the life of the property, the subject should be viewed from every angle. The materials, the construction, the location, the recklessness common to men handling other people's property and all the contingencies to which property is liable must be considered. One's own experience in these matters is the best basis for estimating; the next best is the experience of others.

The percentages of depreciation in quite general use are: Buildings, three per cent; machinery, ten per cent; power plants, seven per cent; tools and fixtures, fifteen per cent; office furniture, ten per cent; horses and wagons, twenty per cent; automobile trucks, thirty-three and a third per cent. These percentages *must not be taken as authoritative* because, as stated before, all these percentages may vary according to circumstances.

No depreciation should be figured on sites or land on which the plant is located. Neither is any account taken of appreciation.

In every line of business, there will be a regular demand for ordinary repairs, renewals, replacements and the like. These outlays are a part of the ordinary running or operating expenses and in no sense are a charge upon depreciation reserve. In defining the depreciation charge Henry Parker Willis, an accounting authority, says:

"Depreciation is the larger conception of general loss of value rather than that of special and minor injury due to use." To illustrate this, we will suppose we have a coal elevator worth, say, $5,000; that is we have invested $5,000 of our capital in such a way that the money will be put at work. We will go on the logical assumption that nothing is ever better than when it is brand new. Hence it is presumed that when this elevator is turned over to us by the contractor it is in shape to earn adequate returns on the amount invested; it is in its state of highest efficiency. After a few weeks of operation, the conveyor belt breaks and repairs to the extent of fifty dollars are necessitated. The fifty dollar charge does not represent the fact that the value of the plant has depreciated fifty dollars, but it does mean that it will require that much money to bring the plant to the efficiency required for it to earn as much on the investment as when it was new and in complete working order.

Unless the repair is made the elevator can not operate and the repair charge is an operating expense and should be so considered. The plant depreciates in value whether it is running or remaining idle. This loss of value is already provided for in the account 'Depreciation' which is a fixed account, the items of which should not be augmented or decreased unless the basis for the entire account is augmented or decreased.

No. 12—Postage: To this account should be charged all amounts paid for postage. A great many firms handle this item through their petty cash accounts, which is not a true showing of expenses. It should be shown in a separate account the same as any other permanent expense.

No. 13—Stationery: To this account should be charged all amounts expended for stationery. This includes statements, bill heads, invoices, letter heads, envelopes, tags and the various ledgers, account books, scale tickets and all paper used for accounting, carbon sheets, typewriter ribbons, scratchers, erasers, pens and ink, and all the miscellaneous supplies used by the accounting force in the keeping of the records.

No. 14—Incidentals: This is an account that is subject to a great deal of abuse. To this account should be charged all items not covered by the other thirteen accounts in "General Expense Group A." Items which do not occur frequently enough to warrant the opening of a special account for them belong in this account. Because of the diversity of items which can be included under this head, clerks under pressure of affairs will include in this account items which properly belong to other accounts. This fact frequently results in the account "Incidentals" showing a total entirely unwarranted and sometimes greater than any other item of expense except salaries and wages. There is no excuse for such a proceeding other than a lack of knowledge of how to classify accounts. This condition is usually the result of downright laziness. If any one item of incidental expense occurs often enough, such as for instance telegraph expenses, it is best to open an account with that expense. The account "Incidentals" is not a catch-all but is legitimately intended only for what the name implies—incidental expenses for which no other provision has been made.

Chapter Four

A Stock Record or Inventory Is Necessary to Accurate Bookkeeping—Coal Which Represents Money Must Be Accounted for as Accurately as Cash.

Some mathematician said: "Any problem is half solved the instant one is able to read it correctly." In accounting for retail costs, the bookkeeping is half done the instant one learns where to make a charge or a credit and why. We have divided all expenses broadly into Group A or general expense and group B, operating expense. But what is "operating expense"? The answer to that question will make all bookkeeping easy and incidentally will make cost accounting accurate.

Operating expense is charged with all amounts expended in performing a certain piece of work and in purchasing and applying the supplies necessary for that work.

That is the operating expense of a retail dealer does not include the cost of the coal itself; that is charged to another and separate account. This expense does include the cost of all services of the retail coal establishment in supplying the consumer with that coal. It therefore covers all cost of preparing, cleaning, storing, handling and delivering the product. Those things which we have included under "Group B" involve the "direct" expenses, which must be added to the price of the coal in order to determine the total cost of the coal to the retail dealer. Naturally, unless these expenses are added to the price of coal delivered at the yard, the statement of cost is not accurate.

However, the operating expense is a big item which branches into many departments. It cannot be discussed as a whole with any hope of clarity. To simplify it, we will discuss one department at a time. To start from the very beginning we will in this chapter, discuss the stock of coal on hand and after outlining the items of cost, we will formulate a method of keeping a record of that stock. It is obvious that no man can compute the cost of anything until he has something. The retail merchant's something is a stock of coal. Before he can figure costs he must have a record of both quantity and value. This record should show the quantity, the kind, the grade and the price of the coal on hand. From this record, if properly kept, it should be possible to determine the rate of movement of the coal or the "Turn Over," the need for purchasing fresh supplies and if properly maintained this record is not only an accountant's starting point, but a perpetual and accurate book inventory of the yard's merchandise.

It is astounding how many coal merchants fail to keep even an approach to a stock record. Their knowledge of the stock on hand, therefore, is nothing more than pure guess work. For this reason, not a single balance sheet from their books is or can be accurate. They have begged one premise; they must beg all later premises. They start wrong; they must end wrong.

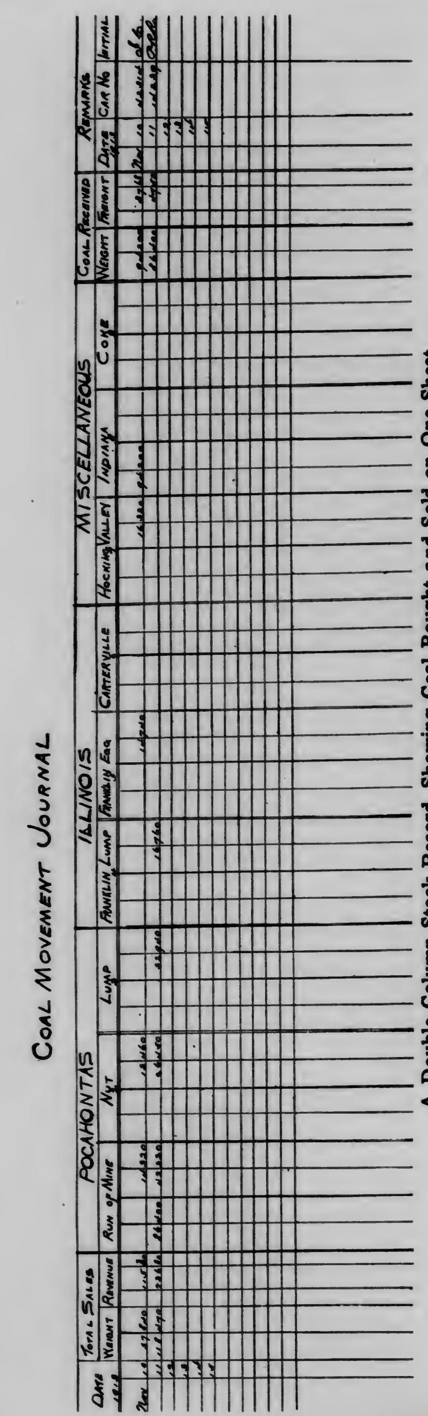
Here is another thing to consider. It is impossible to "close" any set of books without an inventory. The books must be closed at some time or there is no basis for declaring dividends or taking a profit. If an inventory is necessary there are but two ways of taking it. One is to have an engineer to take measurements on coal piles. The other is to keep a perpetual inventory. The time and labor saved when an actual inventory is taken will pay many times for the trouble in keeping a perpetual inventory, which is reason enough for its use. The plan which is here outlined is a perpetual inventory that can be summarized daily if necessary. It will often prevent the merchant from overbuying and, in case a quick estimate of assets is desirable, the stock book will prove of inestimable value.

For instance, if a fire should occur and the plant of the coal merchant be destroyed it would be essential that some record of the stock on hand be shown in order to make a proper and prompt settlement with the fire insurance adjusters. In such an event, the records maintained by the merchant would be the prime governing factor in proving the claim for losses sustained. Every coal merchant, when asking himself the question, "How much coal have I on hand?" should be able to tell almost to the ton the quantity on hand and its cost.

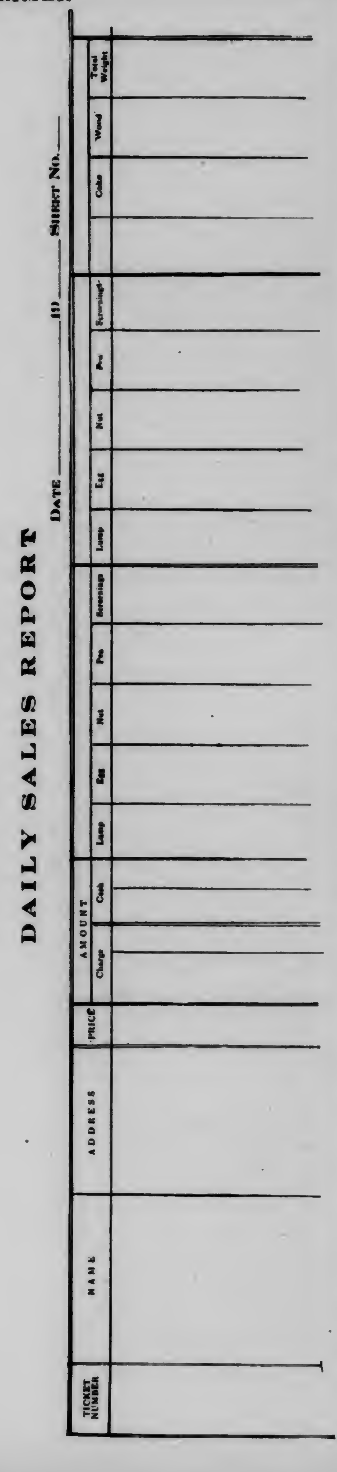
While, as a rule, stock records are rare—hence most books are perpetually out of balance—many coal merchants have spent much time and thought in reducing this problem to its simplest terms. They have in fact solved the problem of keeping a perpetual inventory. With them when the business for the day is over the stock record is checked and closed with as much care as the cash book.

In any business so conducted, cash and coal are interchangeable commodities; they are merely different ways of expressing the same thing. The accounts for one should in consequence receive as much care and attention as the other. That is, the stock cost money itself is, figuratively at least, hidden in the coal pile. It is as important to account for the money in that form as it is to account for cash in bank. Also any additional money put into the stock pile must be accounted for in detail. The accounting for this money is impossible unless there is first accounting for stock to show how much coal one has on hand, its value, the amount sold to date and the rate of movement of the various kinds and grades. Thus the coal merchant can keep an eye on the demand in his territory and is informed of the peculiar needs of his customers. If the inventory sheet shows the coal received and the coal sold, the dealer has a thorough grasp of the physical movement of his merchandise.

In cost accounting, the information con-



A Double Column Stock Record, Showing Coal Bought and Sold on One Sheet.



tained in this stock book or book inventory is absolutely essential. It is from this record that the figures are taken which serve as a foundation for the structure which shows the final cost.

The stock book takes almost as many forms as there are individuals concerned in keeping it. That is, nearly every merchant who keeps such a record handles it in his own way, which is different from every other man's way. There is and can be no cut and dried form or system to apply. The principle which can be observed in all of them is to charge the stock with the coal received, keeping each grade and kind segregated in its proper column. The stock is credited with all sales in the same manner, each grade and kind receiving credit as the sales are recorded. The difference between the amount sold as deducted from the amount on hand is the book inventory of the stock remaining on hand.

Some merchants who handle coal in rather large volume maintain two records. One of them details the items of the coal purchased, and the other shows all the details of the coal sold.

Others record the two transactions—the buying and the selling—on one sheet. Both methods have advantages, but for flexibility and greater efficiency, the first method is favored for large concerns; the latter is perhaps best adapted to small businesses. Too many columns in any record are apt to cause confusion. There is danger of getting too many columns where purchase and sales are recorded on one sheet. The second form, here mentioned, has a column for the coal bought and another for coal sold. Since this double column record will have to be kept for each grade, the tendency is to make the record bulky and inconvenient to handle.

A very comprehensive purchase record is that in use in a Chicago retail coal merchant's office. The form is on the loose leaf principle and requires two pages for the complete record. The columns are headed in the following order: On the first page, "Purchased From," "Kind," "Date Invoice," "Initial,' "Car No.," "Weight Billed," "Price," "At," "Amount Billed," "Demurrage Paid, the Amount and Date," "Freight Paid, the Amount and Date," "Railroad," "Date Delivered," "Paid Shipper," the Amount and Date." On the second page: "Total Weight," "Large Egg," "Small Egg," "Range," "Chestnut," "No. 2 Nut," "Buckwheat," "Screenings," and seven colunms not headed for other grades and other commodities.

It will be noted that the first page is used for all the money transactions involved in the purchases; the second page is concerned only with the coal itself. The items on the first page affect only the values; the items on the second page affect only the quantities.

The first line on these pages is devoted to the amounts brought forward from preceding pages. As the second page covers the quantities, the word "Inventory" is printed on the top line on that page. The other lines are numbered consecutively on each page, so that the corresponding entries on the two pages may be followed without confusion. This form is printed in two colors—pink and blue. The record for anthracite is kept on the blue form and the record for bituminous coals is kept on the pink form. When in use, this form serves the purpose of a stock record, a perpetual inventory, a car record, demurrage record and practically gives the history of each car load of coal from the mine until it is laid down in the bin.

In conjunction with the purchase record, the same dealer has a daily sales report also on the loose leaf principle. This form requires but one sheet for the complete record. The headings of the columns are in this order: "Month," "Day," "Ticket," "Sold to," "Address," "Price," "Labor," "Charge," "Cash," "Total Weight."

The kinds of coal are grouped under these headings: "Anthracite Sales Tonnage," and "Bituminous Sales Tonnage." Under the Anthracite group are the columns sub-headed, "Grate," "Egg," "Stove," "Chestnut," "Pea." The sub-heads under the Bituminous group are, "Pocahontas," "Hocking," "Indiana," "Cannel," and two columns left blank for other kinds of bituminous coal. The last two columns on the form are headed "Coke" and "Wood."

This form gives a complete history of the coal from the bin to the consumer. It shows the day of the transaction; the number of the sales ticket; the name, the address, the incidental labor and the total charge to the consumer. The other columns are used in segregating the coal into the different kinds and grades. The totals of the different kinds of coal on this form deducted from the corresponding totals on the purchase forms will quickly give a book inventory of the amount of coal on hand.

These purchases and sales records are the final result of long experience in the retail coal business and from the various totals can be secured practically all the information necessary to base the cost per ton.

It may appear that the forms and the methods are too elaborate, but when it is considered that they record all the items almost at the time of a transaction and that a complete summary of the business to date may be secured at the close of any one day's business, it will be granted that they fulfill their function adequately. A shorter form which will serve nearly every purpose of the one described, but which is not as complete in detail, is illustrated herewith. In the short form the groups indicating the kinds of coal are left blank and only the headings indicating the grades are shown. Forms of this nature will, of course, vary greatly. One that is appropriate to a certain territory could not be used in another. Still, the underlying principle in all of them is the same. The coal merchant can use this principle in preparing records to suit his own particular need.

The accounting point to be urged is: Coal represents money. Unless the coal is accurately accounted for, it is impossible to account accurately for the money. If books are to be right, the stock record inventory must be right.

Chapter Five

Making Sure That All Direct Expenses Are Charged to the Proper Place to Keep the Cost of Handling Accurate and Dependable.

In retail coal accounting, at once the most bothersome and most important department of the accounts is made up of those charges which are "direct expenses" incident to handling the coal.

The ordinary retail coal accountant finds these items bothersome for this reason: If a man knows what he must charge for any particular kind or grade of coal, he must also know, to the penny per ton, what that coal cost him. To find that figure, he must not only take account of his mine prices and freight bill, but he must, of necessity, charge to each coal every penny that was spent upon it.

But, when it comes to making each of these charges in such a way they are technically accurate, a big practical difficulty presents itself. The expense incurred in handling coal inside the yard is mostly for labor. The laborer is under the direction of the yard foreman, who shifts him from place to place and from job to job. The foreman does not report to the bookkeeper with anything like detailed precision the movements of his men. The bookkeeper himself is not in the yard and cannot, therefore, keep accurate account of each piece of work done by each man. Because of the absence of any possible simple connecting link between the yard orders and the book entries, it is impossible to make each charge exactly to the bin where it should be. An inaccurate charge is worse than none. For this reason, it is best not to try to tie each item of yard labor expense down to a particular grade of coal or to a particular bin containing a particular size. Practicality dictates that general yard labor, for example, should be apportioned over the whole work, the same as the foreman's salary.

However, where any kind of work, like teaming, is performed by any number of men who do nothing else, it is easily possible and proper to charge the individual coals exclusively with that expense.

This general application of certain rapidly fluctuating expenses, does not, however, warrant any yard manager in being careless about keeping accurate account of them. It was said, at the beginning of this volume, that the coal cost is fixed within reason, both by the stability of the mine price and by the arbitrary character of the freight rate. The selling price also is nearly fixed beforehand. Between the fixed cost of coal and the fixed selling price, the retailer has, at best, but narrow room in which to maneuver to get a profit. Some of the items which determine whether or not he is going to make a profit are those fluctuating ones which are included in "direct expense." If, through carelessness, they are permitted to grow and are too high, he loses money. If they can be reduced by supervision he is making money.

Therefore, in order to keep his expense within the boundaries that assure a profit, the dealer must know to a fraction just how much each part of his work is costing him. If one part entails too great an expense, some way must be devised to bring it within reasonable limits. For example, if the coal merchant discovers that the amounts paid for unloading coal from the car to the bin are too great he must pay a less rate per ton or devise some mechanism which will lower the cost. His only alternative is to see his profits eaten up by that expense.

A large firm in a city in northern Indiana installed a cost accounting system. In going over the stable expense, it was found that the horses were eating an unbelievable quantity of oats. Investigation showed that the man in charge of the stable was making a nice little side profit by purchasing oats for the firm and selling them for his own account. This shows one of the many uses of a detailed charge to each department of every expense in that department.

In the same way the cost of the movement of each kind and grade of coal must be, periodically, analyzed. By this analysis only can the dealer discover whether and where his profits are being diverted.

In the movement of each coal, from the time it is included in the stock, some expense is incurred on each coal that does not affect in any way the cost of any other grade or kind. The "direct expenses" affecting the movement of the coal itself we have indicated as belonging to "Group B" or "operating expense" in our broad classification of accounts.

To accomplish the segregation of these costs so that they may take their proper place in the books, it is necessary that each of the "operating expense" accounts be defined. In giving these definitions attention is again called to the fact that the amounts considered as wages to certain persons in reality mean amounts paid for certain services, that is, one person may perform one or more of the functions, but his compensation must be split up among various accounts. The bookkeeper here must consider that the worker is employed for a time by a certain account which must pay his wages for the time employed.

The next account to be considered covers work done on the coal inside of the yard. It covers the superintendence of that work and the labor performed. The account is:

No. 15. Yard Foremen and Yard Labor: To this account should be charged the wages of the foreman who is in charge of all the activities in the yard. His duties compel him to spend some time on each detail of the outside work. Because it is impossible to determine how much time he gives to each detail, his compensation should be prorated over all the items which go to make up the total of yard expense.

To this account should be charged also the wages of the men employed as yard laborers. This labor is, as a rule, as varied as are the duties of the yard foreman. The yard man may be employed consecutively, in cleaning the premises; in making small repairs; in loading wagons; in unloading cars; in clearing or repairing roadways, and in any of the many things necessary in and about a coal yard. It is manifestly impossible, where no timekeeper is employed, to keep account of the time spent on each little piece of work. Hence, for convenience in accounting, this item of expense must be prorated over the whole work.

If, however, the yard man is used for any considerable length of time upon a certain set piece of work, such as bagging coal or coke, a record may be taken of that time and the information used for purposes of arriving at a detailed statement of the expense of that work. However, this labor is so general by nature, that all parts of the work should bear its proper proportion of its expense.

No. 16. Unloading Expense: To this account should be charged the amounts paid to the laborers who shovel the coal from the cars into the bins. This compensation is usually paid on the piece work basis; that is, the men are paid so much per ton handled, therefore, the amount varies with the weight of the contents of the car. If the shoveler is paid on a daily or weekly basis, a record should be kept of the time spent on each car, and hence upon each kind and grade of coal. The expense so found should be charged accordingly. By the piece-work method, each grade and kind would, of course, be charged automatically with the expense as the work was performed.

To this account also should be charged the cost of operating, maintaining and repairing any mechanical appliances used for unloading coal, such as car scrapers and portable conveyor belts and their trucks, the cost of the power, oil, maintenance, repairs and renewals to the machines should be included. Also, all labor which handles the machines or devices should be charged to the unloading expense.

No. 17. Teaming Expenses: To this account should be charged all items of expense incurred in delivering the coal to the consumer and also all items of expense which are necessary parts of making that delivery possible. Thus, this expense involves the horses, their feed and care, the harness upkeep and repairs, the wagons, maintenance, repairs and renewals, the auto truck, supplies, maintenance, renewals and repairs. For the purpose of cost analysis, it would be best to subdivide this account into four sub-accounts to cover the stable expense, the horses, the actual delivery expense, and the equipment. We will, for convenience, proceed on that basis, styling the first account *"17 A. Stable Expense."* To this account should be charged: The wages paid to the stable boss and the hostlers; the cost of the hay, oats, corn and other feed; the cost of hauling away manure; the cost of repairs and renewals, the water and the lights used in the stable.

The second sub-account will cover the expense of the horses and we will call it *"17 B. Horses."* To this account should be charged: The amounts paid to the veterinary; the medicines used; the repairs and renewals of the tools and mechanical appliances used in keeping the horses clean and in condition; the cost of horse shoes, and, in case a horseshoer is employed, his wages should be included in this account.

The third sub-account relates to the equipment, the harness and wagons. We will call is *"17 C. Equipment."* To this account should be charged: The cost of repairs and renewals of the harness; the amounts paid for soaps and oils to maintain the harness in presentable condition; the polish necessary to furbish the ornaments, and all incidental expenses incurred in keeping the harness in working order. To this account should also be charged: The cost of repairs and renewals to the wagons; the cost of renewing the paint; the cost of repairs and renewals of the metal chutes used in unloading, and all incidental expenses necessary to keep the wagons in efficient working order.

To sub-account *"17 D"* should be charged the wages of the teamsters and the amounts paid to the labor used to carry in coal. This latter amount is usually an extra charge on the consumer. In that case the coal dealer is only an agent for the consumer and this amount should not be charged to this account. If, however, the carry-in charge is not an extra charge on the consumer, the dealer must add this amount to his cost of handling.

It often happens that a dealer does not maintain his own delivery service, usually making a contract for this work with some drayage concern. This condition also obtains even with dealers who own their teams, especially during the rush seasons, when the home equipment has more than it can handle, it is necessary to obtain outside help. For this charge it would be better to maintain yet another sub-division of the account "Teaming Expense" and style it "Cartage." Entries in such an account should only be made in the cases cited, *i e.,* to record amounts paid to outside parties for delivery work ordinarily accomplished by the dealer's own equipment.

There is another class of equipment used in the delivery of coal the expenses for which should, in our opinion, be recorded in a separate set of accounts. We refer to the auto trucks. While there are no teams involved, the service performed by the truck is the same as that done by the teams and the expenses incurred come under the head "Teaming Expense." The majority, of coal merchants using auto trucks also use teams, hence the expenses incurred in making deliveries is placed in the teaming expense account. Therefore, to this account should be charged the wages of the driver, the cost of the gasoline, the oils, the maintenance, repairs and renewals of the machinery and tires, the cost of maintaining and repairing the unloading chutes and all expenses incidental to the operation of the auto trucks.

To this account should be charged the cost of maintenance, repairing and operating the garage and all the cost of maintaining, repairing and operating the machinery and appliances, gasoline tanks, air compressors, hose and all the necessary appurtenances. The wages of the garage attendants and the expense of maintaining the performance sheets, *i. e.,* the record of the work done by the auto trucks, should also be charged here.

Chapter Six

Pocket Expenses Are Mainly Charges to Mechanical Labor and Demand a Separate Account—How to Account for Shortage and Demurrage.

The retail coal merchants' business may be summarized in three crisp words—buying, selling and delivery. Coal yard accounting is more concerned with delivery than with the other two factors in the trinity. That is true first because delivery and its costs dig so deeply into the margin between buying and selling price, and, second; because as it is made up of so many complex items which must be accounted for.

For one thing, the time factor in delivery is a most vital item. The passing of time, alone, means nothing to the accountant. When that time is burdened by a fixed cost per hour, it means everything to him.

One who must pay out money—figuratively, every time the clock strikes, learns to see that that labor is producing something which returns more than he pays out. If delivery is done mainly by labor, is done in part by means of mechanical devices, makes no difference to the accountant. He says that all labor used to accomplish a certain result must be paid for. If the labor of machines does the work within a shorter time than is possible by means of hand labor, he is interested in machine labor because it makes a lighter draft upon the cash box. But, hand labor was in use before machines were dreamed of. The work of the laborers is accounted for in the time sheet—a point which all accountants know. However, the accountant knows that there must also be an accounting for the work of the machine; the device must have its time sheet.

The machine most in evidence in the yard of the retail coal man is the coal pocket and its conveyors, etc. This mechanical labor is in a class by itself, for which reason it is necessary to maintain on the coal merchant's books a separate account with this part of the equipment. This is necessary because the device cost money and it is advisable to determine definitely wherein and whether the pocket reduces the cost of handling, which is one item in the big cost of delivery. The coal pocket and its machinery must have their own labor charges to account for the time of the men employed on them, therefore, we have:

No. 18. Pocket Labor: To this account is charged the wages of the foreman in charge; the men who make the necessary repairs; the engineer, and, if a steam plant, the oilers and the firemen. The accountant who is familiar with such things will recognize here one division of "manufacturing accounting."

There will be necessary, for the pocket, a lot of material and supplies. All of these will be used in operation and should be charged to a separate account. This account is *No. 19. Pocket Supplies:* To this account should be charged all material and supplies necessary to operate and maintain the coal pocket. There should be included all charges for lumber to repair the bins; the bolts; the cost of link chains to repair or replace worn out or broken links in the conveyor chains; the cost of buckets used for replacement; the oils; the electrical supplies necessary for the motor; the cables used for spotting cars; the waste for cleaning machinery; the material for replacing and repairing the loading chutes; and all the miscellaneous items necessary to keep the pocket in first-class working order.

At this point in our series of articles on accounting we have provided for all the expenses which spring from handling the coal. We have put a finger on each item of expense and have told where and why it must be charged. The expenses thus treated must be incurred by every coal merchant whether his business is large or small. Every ton of coal handled must carry its portion—and its just portion—of these expenses. In many cases, all of the expenses there placed must have a direct bearing upon the cost of handling a given coal.

There are, however, some charges which may or may not be incurred. They may be termed occasional expenses, although they make up a part of every man's expense at some time or another. These are expenses which must be added to the cost of handling, despite the fact that the dealer has not of his own volition created them and has no chance whatever to offset them by a credit, anywhere.

We refer here to the charges for demurrage and for shortage.

These charges are not, in reality, necessary, and wholly unavoidable. But, they are, as stated, very common, wherefore, when they do occur they must be considered by the accountant as additions to the cost per ton of handling coal. To get them in a proper place upon the books the following accounts are provided:

No. 20. Demurrage: To this account should be charged all amounts paid to the railroad companies as penalties for delay in unloading their cars. If the dealer is unable—through lack of storage space or inability to secure labor—to empty the car within the time specified by the regulations of the railroad company he must, in effect, use the car as a warehouse. Therefore, the charge is a "direct expense" on the coal the same as its storage bin or pocket expense, and the amount of the demurrage must be added to the cost of that coal.

The space in which to record this charge is provided in the "purchase record" a description of which is to be found in Chapter Four of this volume. This charge is a voracious eater of profit. Frequently it grows to size through the carelessness and mismanagement of the coal merchant. The column in the purchase record should be frequently scrutinized and frequent references to this record should have for their purpose the steady reduction of the expense. Careful watching of this item will frequently eliminate this charge altogether. A good plan for scrutinizing this cost is to keep an inde-

pendent record of cars as received and provide a column which will show on what date the car is up to demurrage. That being done, the merchant can arrange the movement of his coal accordingly. However, this account on the books is only a place to record the amounts that have been paid the railroad company for the release of the car. It therefore becomes a charge upon the particular kind of coal contained in the car.

The shortage account is a source of great annoyance to the retail coal merchant. It usually emanates from the unscientific and all but unconscionable system by which coal weights are obtained and upon which transportation charges are based. Coal customarily is shipped subject to mine weights and is so invoiced. The railroad company is governed by the invoice weight in billing the car, subject only to correction in transit—which seldom is done. While the car is in transit, from the mine to destination, some of the coal falls off. In addition, a certain amount is lost by theft. If the coal is transferred en route—which is unusual—another and heavy loss in weight is liable to occur. All these things being considered, it not infrequently happens that the weight of coal the merchant pays for and the weight he receives are very much at variance.

Sometimes this difference may be adjusted through a claim against the carrier. More often the difference is just small enough to make it unprofitable to handle through the claim channel and it becomes a dead loss to the coal merchant.

If a claim is made for the loss there is added the expense of making and handling the claim usually involving a long and tedious correspondence. When this shortage occurs it must be cared for in the accounts hence, *No. 21 Shortage:* To this account should be charged all amounts representing the loss of tonnage in transit. If a claim is made the amount of the claim should be credited to the shortage account and charged to the accounts receivable, thus eliminating the charge as a factor in cost. If the claim is rejected the charge must be replaced against the coal and the accounts receivable credited. The expense of making and handling the claim will be taken care of in the general overhead expense, as this is a matter which must be handled by the office force.

By handling the shortage account in this manner the bin will be charged with the full invoice weight and the shortage accounted for in the shortage account. This will have the effect of crediting the bin with the tonnage lost and show the true tonnage contained therein.

This account is only for the shortages that occur while the car of coal is in transit to the dealer and does not include shortages that occur after he has accepted the coal. These latter shortages are usually caused by pilferage from the yard and by the degradation of the coal while in storage. This loss is usually termed shrinkage and should be taken care of at the time of inventory. Some of the loss that occurs in the process of degradation may be recovered by the sale of the coal as some other grade, such as slack. In that case the bin should be credited with the sum realized from the sale of the degraded coal.

Chapter Seven

Having Told in Previous Chapters What to Do and Why, This Article Begins to Tell in Detail How to Do It—A Lesson in Methods.

A story is told of a man who wanted to learn to play the violin. He worked patiently on "exercises" for years and years. Finally, he tired of that juvenile work and went to the instructor asking that he be given some "music" to play. The professor smilingly replied that the last "exercise" was the most difficult piece of music ever written for the violin. The man had become a master without knowing it.

We have written six rather long chapters on retail coal yard accounting. They seemed to be mostly definitions and statements as to where certain charges and credits should be made, and why. This seemed, all the while, to be merely "breaking ground" for what we had to say. However, any man who has digested what has gone before has learned about all there is to accounting if the purpose is to find a way to determine retail coal cost. If he knows what a charge is and where to make it and if he understands the same thing about a credit, he has mastered the whole subject of bookkeeping. The remainder of it is merely so much detail—it is only writing down what he knows in a book. It will be easy, now that the rules of the game have been recited, to tell how to apply those rules. The application will be so simple we will spend very little time over it.

That is, we have devoted our efforts heretofore to defining and classifying the various items which must be considered when one starts to figure the cost of handling coal. We have segregated the various expenditures into classes and have indicated their proper location in the books.

We must now assemble this information, placing the items in their proper relation so that each grade and kind of coal handled shall be charged with its pro rata proportion of the entire expense of the business. In other words, we must make our ledger tell us wherein we have done well or ill; how we can improve our methods, and, whether any of our many items of cost can be reduced.

For example, if any of the items are costly out of reasonable proportion, to what it should be or has been, it is evident that there is or has been some mismanagement as far as the work represented by that item is concerned. Knowing the facts, it behooves us to remedy the fault as soon as possible. The books point the way; the remedy lies with the management.

It may be that a certain piece of equipment is absorbing too much revenue in order to keep it in repair. It is self evident that, knowing the facts, real economy would dictate the relegation of that equipment to the junk pile and the purchase of new machinery, wagons or whatever it might be. The books point the way; the management must apply the remedy.

The overhead expense might be a great deal heavier than the business warrants. In such an event, an overhauling of official and clerical salaries would be necessary in order to bring this expense down to its proper level in the disbursements for expenses. In this direction, also, the books point the way; the cure lies with the yard owner.

In summarizing the various items which in the aggregate show the total cost of handling, there must first be taken into consideration the material handled. The amount of coal on which the dealer figures his profit is the number of tons of coal sold only. That is, for the purpose of determining costs of handling only the amount of coal sold is used as a basis. The expense for any period must be spread over the sales of that period to get the cost per ton.

The purchase record, described in Chapter Four of this volume, gave the source of the original cost to the dealer. This indicated that the cost of the coal laid down in the bin includes the price paid at the mine plus the railroad freight rate to destination. It also includes any extraordinary charges, such as demurrage and all other expenses incurred in placing the coal at the disposition of the coal merchant. For example, if a spotting charge is made, it will include that item also. These things give the basis of cost.

The sales record, described in the same chapter, is the source of the information as to the amount of coal sold. The base of the cost of handling is thus secured. In the sales record is given the tonnage and the value of the tonnage actually handled by the dealer in the course of his business. It is this tonnage sold that forms the key to the total cost of handling and all our figures are secured from the manipulation of this tonnage in relation to all the other expenses. These other expenses as classified and defined in the preceding chapters must be considered in the problem now before us, which is to assemble these accounts in such a manner that the result will be the total cost per ton handled.

After considering the material and its various subdivisions, the next item is naturally the labor charges involved in moving the material. By labor charge we mean the compensation paid to everyone working for the coal company, from the president down to the lowest grade of laborer. This charge is generally designated under the term Salaries and Wages and is usually shown in the balance sheet under that heading. The charge to salaries and wages must be distributed over the seven accounts as defined in Chapter Two and as indicated with the chart published therewith. The accounts affected follow: No. 1 Officials, No. 2 Office, No. 3 Selling, No. 15 Yard Foremen and Labor, No. 16 Car Unloaders, No. 17 Teaming Expense, the stable boss, hostlers and teamsters and No. 18 The Pocket Expense, the pocket foreman, labor, repair men, engineer, oilers and firemen. It must be remembered that all of the positions indicated do not mean persons, but rather are used to typify the various subdivisions of labor and that several of these positions may be held and the duties performed by one man. In making up the pay rolls it has been thought best to divide the payment into four records as indicated in the chart "Distribution of Salaries and Wages" shown herewith. In the first payroll or division will be shown the salaries of the officials, the president, vice-president, secretary and treasurer. As their activities cover everything done in the yard the compensation paid them must be distributed over the whole work. In the second payment or division are included the salaries paid to the general manager and under him the salaries paid the cashier, clerks, stenographers, bookkeepers and others comprising the office force. This compensation also must be distributed over the whole work as the services in which these persons are engaged affect every branch of the coal yards activities. The third division records the salaries paid the selling force, the general sales agent and his aides and this compensation is distributed over the whole work in the same manner as the two preceding divisions. For convenience, this expense is, however, shown separately, for the reason that the percentage ratio of the increase and decrease of this account to the increase and decrease in the sales determines the efficiency of the selling department.

If the salesmen are on a commission basis or on a salary and commission basis the compensation is carried on this pay roll and therefore the total amount of the payments for this expense will vary each month. If the sales are heavy this roll will be proportionately heavy and if light the roll will be correspondingly low. The pay roll does not carry any commissions advanced for any purpose. As has been explained all commissions not earned must be considered as a loan from the treasury of the company and are not an expense until they have been earned. It is from this roll the general manager or general sales agent determines the efficiency of each of the salesmen. The fourth division or pay roll covers the wages paid to the men engaged in the actual handling of the coal and is distributed over the four accounts Nos. 15, 16, 17 and 18.

No. 15 includes the wages paid the yard foreman and the wages paid the laborers engaged in yard labor. If this yard labor is used in unloading cars the time so spent must be accounted for separately in the account Unloading Expense and the charge made directly to the kind and grade of coal affected.

In case the yard labor is used in sacking coal or coke the time so spent should be recorded, as the expense should be borne by the kind and grade of coal and coke sacked. If the laborer does nothing else but sack coal of course his compensation is to be charged only to the kind and grade of coal with which he works.

If the labor is used in the yard exclusively, the total may be included with the compensation paid the yard foreman for the purpose of prorating, that is, all the kinds and grades of coal must bear their proportion of the charge.

The wages paid the stable boss, the hostlers, the teamsters and other persons engaged in the delivery of the coal to the consumer should be charged to Account 17 "Teaming Expense." In

Distribution of Salaries and Wages

	Vou	Total	1 Officials	2 Office	3 Selling	15 Yard	16 Car Unloaders	17 Stable	18 Pocket
Pay Roll 1									
" 2									
" 3									
" 4									
Total									

this connection there is a charge generally designated as a "Carry In" charge which is designed to cover the cost of the extra labor sometimes necessary in placing the coal in the bins of the consumers. If the dealer has to pay this charge it is proper to include it in the delivery expense, but if the consumer is charged for this extra service the dealer is acting as an agent for the purchaser and therefore is reimbursed for the extra outlay and it is not a proper charge to the cost of handling. The compensation of the men employed on the coal pocket should be charged to Account 18 "Pocket Labor." This account is kept separate in order to determine the details of the profit or loss arising from handling the coal with a pocket. The charge is to be distributed over only the grades and kinds of coal handled by the pocket as it affects only those coals. In the form Distribution of Salaries and Wages provision has been made to distribute the four divisions of the pay rolls to the proper accounts. The first column shows the total amount of each division. The grand total will show all amounts expended for Salaries and Wages. The other columns, headed with the name and number of each account, will show the total amount to be charged to each account and prorated over that part of the work affected. It is hardly necessary to go to the expense of having this form printed as one may be readily drawn in a very few minutes. Only one of them is needed each month and its various columns can be filled from the time book or from whatever means the dealer uses to record his payments for Salaries and Wages. In case a regular pay roll is used the pay roll form could have the distribution printed on the back and thus the one form could fulfill all the requirements of the pay roll as an accounting record. In case regular payroll forms are used it is usually the practice to have the roll in the four divisions as described above. The labor compensation as a rule is paid weekly and the Official and Office salaries are paid monthly or semi-monthly. It will, in that case, be necessary to assemble all the payments at the end of the month for the purpose of distribution. It is recommended that the coal merchant provide himself with some blank forms, in size about fourteen inches by twenty-one, which will provide space for about twenty columns ruled for figures denoting money and enough space at the left of the form for all written details. These forms may be purchased ready made at nearly every stationer's and at a very low price. They will be found to be a very great convenience for all purposes of analysis. The accountant can use these forms for nearly every comparison necessary for him to make.

Chapter Eight

How to Get the Information Out of the Books in a Way to Make It Suggest Certain Economies in the Business.

The books of a coal company have two different purposes. One of them is to become a repository for information. A repository of anything is, in itself, nothing of value. If it is a book and if the thing contained is information, the information may be kept ever so safely but, if no use is ever made of it, it might as well not exist. The books, under such circumstances, are about as purposeless as a miser's gold. Getting information into the books is, therefore, valuable only when it can be gotten out again and made of some use.

A bookkeeper is a man who puts the information into the books. Any clerk can stow away anything. He may even stow it away in such orderly fashion it will come out quickly when wanted. However, the bookkeeper is never the man who pulls out the information from the ledger and uses it to correct any bad policies in the business. If he tried, he would be discharged for his audacity.

The other or second purpose of the books is to yield up an array of facts that would throw a searchlight upon the operations of a company of such nature as to suggest where wrong methods are heading toward loss. That happens when the books begin, under the hand of a man who knows, to divulge their contents in an orderly fashion, such a thing makes suggestions where and when reforms in practice should be undertaken.

This secondary purpose of the books is the one, really, for which they were created. That is, anything that is worth stowing away is presupposed to have value for use at some other time. Men put money away with the intention of using it again. Business men stow away information—especially information about the details of the business—only for the purpose of getting it out at a time when it will prove valuable. No man, for example, would, actuated by a mania for keeping records, record what he paid a yard man, merely to know that he had paid out that money. This information has value when properly used. The thing is to find that value.

The man who drags the information out of the books and makes it live is called—if that is his business—an accountant. The small man in a business who may not employ an accountant but who himself thus gives life to the books is the owner or at least the executive head of the concern. The books were made for him. The records in those books were designed to teach him a lesson—a lesson of bitter experience, it may be. The record is intended to teach him to cut expenses—if he has been letting things run at loose ends.

In this primer on "accounting"—not on book keeping—we have been trying to tell the bookkeeper—and the executive—how to arrange the information in the books so that the executive can get it out of the books and use it. We have been teaching how to stow the facts of the business away in such orderly fashion that it will fall out almost of its own volition and easily assemble itself upon a sheet where the executive can get at it quickly and make it give him a suggestion as to how and where to economize.

In this installment of this accounting article, we were presenting in pursuance of our plan, to the executive a chart upon which these stored facts will arrange themselves in logical order and throw the needed searchlight upon the operation of the whole plant.

Before any such chart is of any value it is assumed that the coal merchant is ready to distribute his entire expenses—having kept detailed account of every penny—over the different kinds and grades of coal. That is, he wants to know what is the cost of handling on each grade and he starts to get the information. He has closed his purchase record for the month; the totals of the sales record have all been ascertained, and it now remains for him to place the resulting figures in their proper relation.

From the purchase record he will find that on the first of the month he had a certain quantity of coal on hand; that during the month he purchased several more cars; that in the course of receiving this coal he was penalized by the railroad company for failure to unload this coal promptly, and that somewhere between the mine and his bins some of the coal has either been stolen or has fallen off the car.

All of the charges, detailing the original cost of the coal, have been included in the record which shows: The price of the mine; the freight charges; the demurrage and the shortage, and the cost of placing the coal in the bins ready for delivery. The total of these charges divided by the weight involved gives the merchant the total original cost per ton.

On the other hand, is the sales record which shows in detail: How much of each kind and grade of coal the merchant turned over to the consumer during the month; the price and the total receipts from sales. The total of the coal tonnage sold, divided into the total sales will give the price per ton the merchant received for his coal.

The difference between the total cost per ton, and the total selling price per ton, will give the gross profit per ton. Out of this gross profit the merchant must pay the expenses of his business. The difference between his gross profits and the expenses will, of course, be the net profit for which the merchant is striving.

From the form which is printed herewith the merchant may discover why a certain coal is profitable or unprofitable, as the case may be, to handle. If the coal is unprofitable the merchant learns from this record what item of ex-

Distribution of Expenses Month of

	Total	Grate	Egg	Stove	Chestnut	Pea	Pocahontas	Kentucky	Indiana	Illinois	Cannel
		Anthracite					Bituminous				
Per Cents	100										
Tons											
Original Cost											
1 Officials											
2 Office Salaries											
3 Sales											
4 Disc't & Int.											
5 Rent											
6 Lighting											
7 Telephone											
8 Advertising											
9 Insurance											
10 Taxes											
11 Depreciation											
12 Postage											
13 Stationery											
14 Incidentals											
15 Yards											
17 Teaming Exp.											
18 Pocket Labor											
Total Cost											
Per Ton											
Total Sales											
Per Ton											
Net Profit											
Loss											
Per Ton											

pense has eaten up the profit. From these details he may learn at what point he is paying too heavy a price for the service rendered.

In preparing this form, the amount of coal sold is used as the basis, because that is the amount on which the dealer figures his profit. This tonnage is gathered from the footing on the sales record and is placed in the space in the recapitulation chart headed "Tons." The tons of each kind and grade of coal are spread over the form in the proper spaces and under the headings indicated. This total tonnage is one hundred per cent of the coal sold. The tonnages shown under each heading will therefore represent a certain percentage of the total tons sold. This percentage is ascertained by dividing the total tonnage into the number of tons of each grade. The percentage figure is then placed in the space provided for that purpose.

A time-saving method of securing these percentages may here be indicated. It may be used in any calculation involving a great many sums in division having a common divisor. It is simply to multiply the divisor by the digits from one to nine, placing the results on a memorandum until all the divisions are made. Thus, suppose the total tonnage sold to be 6,200.

6200 × 1 6,200
6200 × 2 12,400
6200 × 3 18,600
6200 × 4 24,800
6200 × 4 31,000
6200 × 5 37,200
6200 × 6 43,400
6200 × 7 49,600
6200 × 8 55,800
6200 × 9

By this method all the necessary multiplications are performed at one time and a good deal of time saved in making the divisions.

The total of all the percentages thus found should, of course, equal the one hundred per cent.

From the purchase record is ascertained the total cost per ton of each grade of coal at the close of the month. This cost includes all the legitimate and extraordinary charges necessary to place the coal in the bin. The tonnage of each grade shown on the form, "Distribution of Expenses," multiplied by the total cost per ton will give the original cost of each grade sold. The amount is placed in the line provided for these amounts under the proper heading.

We will now take the general ledger from which the balance of our information is obtained. The item "Salaries and Wages" in the ledger has been distributed in the form "Distribution of Salaries and Wages" as shown in the last chapter, and the various totals of that form are to be included in each account before prorating. The first item to prorate then will be the total of the amounts charged in the account "Officials" and will include the expenses incurred by the officials, plus the compensation allowed them as per the total of the Column One in the "Distribution of Salaries and Wages." The total thus secured is placed in the column headed "Total" and each kind and grade of coal will be charged with the percentage pro rata of this total expense as per the percent figure shown at the head of each column.

For example, we will suppose the total expense for "Officials" for the month, including the salaries and traveling expenses, to be $640.00. We will say the sales of anthracite egg were four per cent of the total sales and that the sales of Pocahontas were twenty-six per cent of the total sales. The charge to anthracite egg would then be four per cent of $640.00, or $25.60, and the charge to Pocahontas would be twenty-six per cent or $154.40. Each grade of coal will bear its percentage proportion of the expense until the entire 100 per cent has been distributed.

The same method would be observed in distributing the salaries of the employes in the office as defined in Chapter Two.

Item three, in this plan of distribution, will prorate the selling expense including the traveling and incidental expenses of the salesmen, the commissions and salaries paid them and any bonuses earned by them. The ledger should detail the traveling and incidental expenses. The amount of the compensation is obtained from the total No. 3 of the "Distribution of Salaries and Wages." Items for the accounts—4 discount and interest; 5 rent; 6 lighting; 7 telephone; 8 advertising—are obtained from the ledger and are prorated to each grade of coal at the per cent indicated at the head of the column for that grade. In preparing Account 9—insurance for prorating—care should be used that only the amount of insurance expired for the month should be used. That is, the total charge for insurance for any one month should be only one-twelfth of the annual premium. In case the firm has liability insurance, the expense for that also can be prorated with this item.

The amount to prorate for Account 10—taxes—should be handled in a similar manner as insurance. This account should bear taxes of every description, personal and real property, water, wheel and special assessments such as those for street improvements and the like. Only the amount accruing for the month should be prorated.

The amount charged to Account 11—Depreciation—is based on the annual appraisal and therefore the amount of depreciation to be prorated should be only one-twelfth of the total amount charged to this account. If a still more detailed analysis of this account is desired, it may be distributed in the same manner as were the salaries and wages; that is, the amounts of depreciation on the buildings, pockets, bins, machine equipment, wagons and horses can be segregated. The expense for buildings, bins and machine equipment should be prorated over the whole work and that for wagons, horses, autos and delivery items should be charged to "Teaming Expense" before prorating. The depreciation expense for pockets can also be handled in the same way.

Accounts—12 postage; 13 stationery; and 14 incidentals—are taken from the ledger and prorated over the whole work according to the percentage indicated at the head of the column.

Account 15, covering yard foremen and yard

labor, as shown on the "Distribution of Salaries and Wages" form, on the line "Pay Roll 4," will bear some explanation. The salary of the foreman is a burden upon the whole work and should therefore be prorated over the whole. The yard laborer, on the other hand, may be engaged in a specific kind of work and a direct charge on that piece of work may be obtained. For example, the yard laborer may be engaged for, say, two hours daily on cleaning up the yard and on all-around work. In that case, the charge is to "Account 15, Yard Labor," and is prorated over all the work. Another portion of his time he spends in unloading cars, a little while later he is employed around the stable or the pocket. The time sheet should record how much of his time is spent on each duty and the compensation spread over the accounts 15, 16, 17 and 18 accordingly. By this method the Account 15 has in it only the charges which should be prorated over the whole work, and the total of the column headed 15 in the "Distribution of Salaries and Wages" may be spread over the whole work.

Account 17: Teaming Expense will include: The totals of the four sub-divisions of this account A, B, C and D; the expenses for cartage or the hire of outside teams; the expenses of the auto trucks, and the total of the Column 17 in the "Distribution of Salaries and Wages." If the account "Depreciation" is distributed, Account 17 will bear the proportion charged for depreciation of wagons, harness and horses also. The grand total of all these items will be prorated over all the work.

In arriving at the amount of expense in handling coal through the pockets, there are two things to be considered. One is the expense of putting the coal in the bin and the other the expense of getting it out again for delivery to the consumer. The cost of putting it in the bin and caring for it in the bin, will be handled through the purchase record in the same manner as the coal which is not handled through the pocket, so that the total cost of the coal may be figured and displayed in its proper section of the "Distribution of Expenses." The machinery of the pocket is used mainly to so dispose of the coal that it may readily be available for quick loading.

In other words, the machinery is used to properly store the coal; therefore the expenses of the pocket should go into the total cost, taking the place of much labor that would be necessary if no pocket were used.

In addition to these charges is the charge for labor involved in loading the coal for delivery into the wagons. It is only these latter charges that are to be distributed in the form "Distribution of Expenses" in the line "Pocket Labor."

In closing this form, all of the columns are to be added and the sum of all the totals should equal the total shown in the first column under the heading "Total." The total amount of money spent for each grade—shown in the line "Total Cost"—divided by the number of tons of that grade sold, as shown at the head of the column devoted to that grade, will give the total cost per ton for that grade. The total amount received from sales of each grade divided by the same number of tons of that grade will give the price received per ton for that grade. The difference between the total cost and the total receipts from sales will show the net profit or loss for each grade. This divided by the number of tons will give the net profit or loss per ton.

Date	Name		
APR 24 1923	Bindery APR 27 1923		
	M C Hartley		
	M C Hartley		

END OF
TITLE